

Application No. 09/636,286

RD-27791

**Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims**

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)
16. (canceled)

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17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (new) A method for forming an elongated fused quartz article comprising:

feeding a  $\text{SiO}_2$  material into a furnace melting zone comprising a refractory material wall comprising tungsten, molybdenum or mixtures thereof with a protective lining selected from the group consisting of rhenium, osmium, iridium and mixtures thereof;

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feeding a gas mixture comprising at least (1) one inert carrier gas comprising a member selected from the group consisting of a hydrogen carrier gas and a noble carrier gas and (2) an oxidizing gas into the protectively lined furnace melting zone;

fusing the  $\text{SiO}_2$  material in the protectively lined melting zone of the furnace in the presence of the gas mixture; and

drawing the fused  $\text{SiO}_2$  material from the furnace to form the fused quartz article.

33. (new) The method of claim 32, wherein the oxidizing gas is water vapor or air.

34. (new) The method of claim 32, wherein the oxidizing gas is water vapor.

35. (new) The method of claim 32, wherein the oxidizing gas is air

36. (new) The method of claim 32, wherein the gas mixture comprises hydrogen with a dew point of greater than  $50^\circ\text{C}$ .

37. (new) The method of claim 32, wherein said protective lining comprises rhenium.

38. (new) The method of claim 32, comprising drawing a fused  $\text{SiO}_2$  material having less than 10 ppb dissolved refractory metal content from the furnace.

39. (new) The method of claim 32, comprising drawing a fused  $\text{SiO}_2$  material having less than 1 ppb dissolved refractory metal content from the furnace.

40. (new) The method of claim 32, comprising fusing the  $\text{SiO}_2$  material at a temperature in excess of  $2050^\circ\text{C}$ .